WSDA Summary Report for 2002-2003

The Pesticide Management Division of the Washington State Department of Agriculture (WSDA) protects human health and the environment by ensuring the safe and legal distribution, use, and disposal of pesticides in Washington State.

The WSDA investigates all complaints received by the agency regarding possible pesticide misuse, storage, sales, distribution, applicator licensing, and building structure inspections for wood destroying organisms. The agency also inspects marketplaces, importers, manufacturers, and pesticide users for compliance with state and federal laws and regulations.

Complaints

During 2002, WSDA investigated 255 complaints (Table 12). After investigation, it was determined that 138 (54%) involved pesticide applications and 117 (46%) were unrelated to actual applications. Examples of complaints unrelated to an application are structural inspections. There were 169 violations associated with the 255 complaints.

Table 12. WSDA Complaints and Violations, 1999 - 2003

Year	Total Complaints	Violations
1999	192	101 (53%)
2000	199	121 (61%
2001	225	152 (68%)
2002	255	169 (66%)
2003	222	151 (68%)

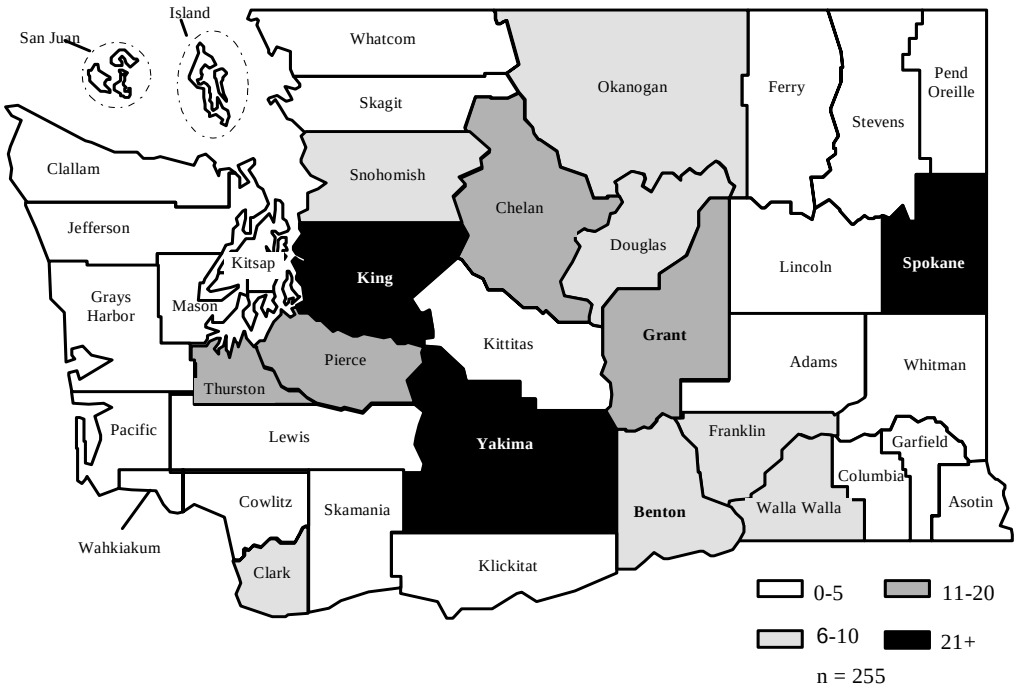
During 2003, WSDA investigated 222 complaints. After investigation, it was determined that 136 (61%) involved pesticide applications and 86 (39%) were unrelated to applications. There were 151 violations associated with the 222 complaints. See Appendix C for a listing of all WSDA pesticide-related complaint investigations for 2002 and 2003.

Location of Complaints

Complaints continue to be approximately equal in number between eastern and western Washington despite significant differences in population and types of pest problems. The nature of complaints differs between the eastern and western portions of the state. Western Washington complaints generally concern wood destroying organism inspections, homeowner complaints about drift, intentional misuse, and complaints about unlicensed applicators. Eastern Washington complaints generally are about agricultural applications and drift.

In 2002, 142 (56%) of the complaint investigations occurred in eastern Washington and 113 (44%) in western Washington. Nine investigations involved multiple counties. Figure 12 shows the number of complaints by county for 2002.

Figure 12. WSDA Complaints by County, 2002



In 2003, 118 (53%) occurred in eastern Washington and 94 (42%) in western Washington. Ten investigations involved multiple counties or an out of state violation (illegal distribution). Figure 13 shows the number of complaints by county for 2003.

Figure 13. WSDA Complaints by County, 2003

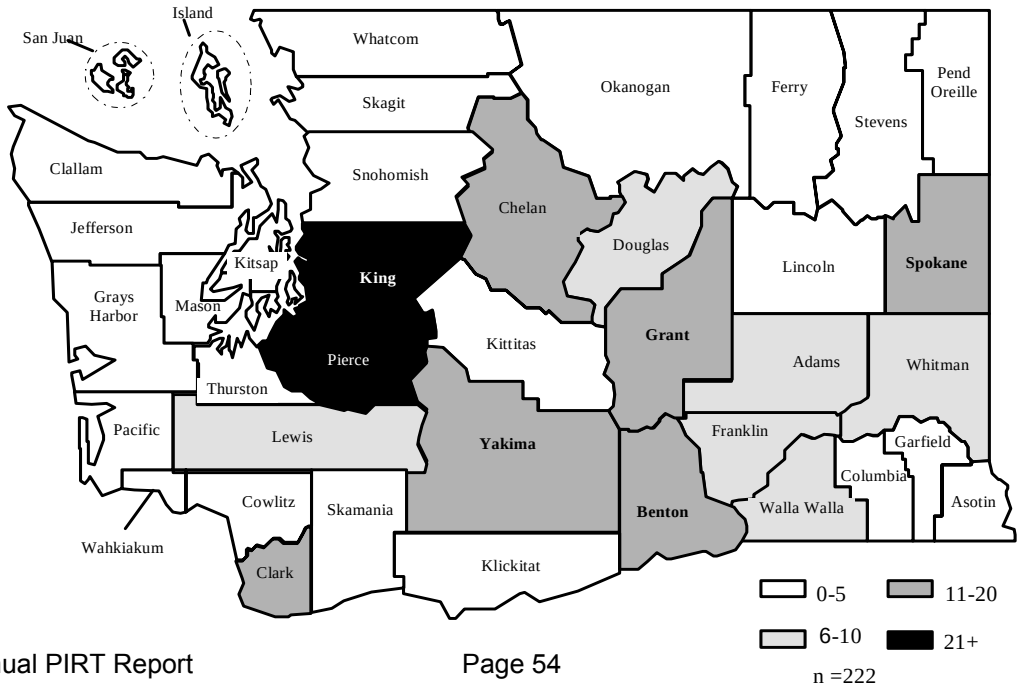


Table 13 lists the counties with the most complaints from 1999 through 2003.

Table 13. WSDA Counties with the Most Complaints, 1999 – 2003

1999		2000		2001		2002		2003	
Grant	29	Yakima	26	King	21	Spokane	28	King	23
Yakima	26	Grant	21	Grant	20	King	27	Pierce	22
Spokane	18	Pierce	16	Spokane	20	Yakima	26	Grant	19
Benton	17	Benton	14	Yakima	18	Thurston	17	Spokane	19
King	14	Chelan	13	Benton	13	Pierce	17	Yakima	13
Chelan	9	Spokane	11	Pierce	12	Chelan	16	Benton	12
Pierce	8	Clark	10	Lewis	11	Grant	16	Chelan	12
Walla Walla	8	Douglas	9	Thurston	10	Multiple	9	Clark	11
		King	8					Multiple	10

Nature of Complaints

Complaints are categorized according to the nature of the initial complaint received. The distribution of complaints for 2002 and 2003 is provided in Figure 14. Investigation may substantiate the initial complaint or identify additional violations. For example, an initial complaint may concern a possible drift, but investigation determines that drift did not occur. Although the applicator would not be cited for drift, he or she could be cited for being "faulty, careless and negligent" or for record keeping violations. When complaints are associated with numerous possible violations, the most serious complaint is used to categorize the case. For example, a complaint involving human exposure caused by drift from application by an unlicensed applicator would be categorized as human exposure even if the only final outcome of the case was a Notice of Correction for record keeping. However, in general, the initial complaint is a fairly reliable indicator of the final outcome of the case and reflects the concerns of the community.

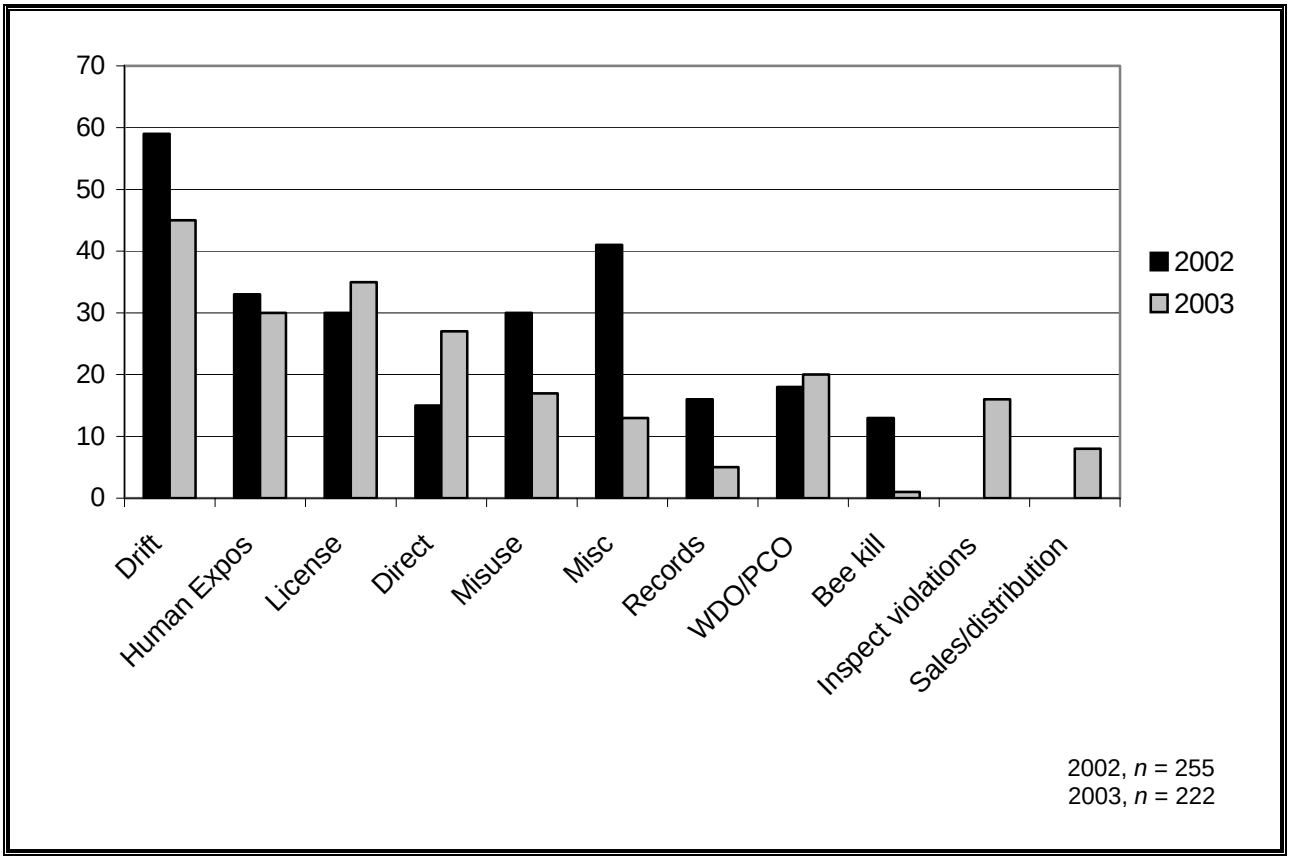
In 2002, WSDA received 59 complaints about drift to property, crops, or animals and 35 complaints about human exposure to pesticides. WSDA received 30 complaints concerning improper or no licensing, 30 about possible misuse, and 18 about Wood Destroying Organism (WDO) Inspections. There were 16 record keeping violations. There were 15 complaints about direct pesticide misapplications. An example of a direct application violation is a commercial applicator applying to the wrong property. There were 13 complaints of bee kills.

In 2003, WSDA received 45 complaints about drift to property, 30 complaints about human exposures and seven complaints about drifts to animals. Pesticides moving off-target appears to be one of the major reasons to register a complaint with WSDA. Non-licensed individuals and faulty structural inspections are two other areas where WSDA receives numerous complaints. The WSDA received 35 complaints about improper or no licensing, 27 complaints about direct misapplications and 20 complaints specific to WDO Inspections (in addition to WDO complaints about improper licenses or records). Only one bee kill, possibly intentional, was reported for 2003.

Inspection Violations

In 2003, WSDA initiated a series of inspections related to use of non-registered wood treatment products at lumberyards and wood treatment plants. Although these Use Inspections, Marketplace Inspections, and License Inspections were not complaint-driven, data from them were collected and are included in the PIRT report as part of the investigation workload. These inspections are listed as Inspection Violations in Figure 14.

Figure 14. WSDA Nature of Initial Complaints, 2002 and 2003



Drift and Human Exposures

During 2003, WSDA received 45 complaints about possible pesticide drift to property, water, or crops and 30 complaints about possible human exposure to pesticides. An analysis was conducted of the complaints to determine how many complaints about human exposures were actually related to drift, regardless of whether a drift violation was the cause of a regulatory action. This analysis determined that:

- 22 of the 45 general drift complaints had residue detected off target.
- 4 of the 30 human exposure complaints were direct exposure.
- 9 of the 30 human exposure complaints were not related to any pesticide exposure.
- 8 of the 17 remaining human exposure complaints were due to drift and had residue detected off target.

No complaints were received in 2003 from farmworkers alleging pesticide exposure from drift. The alleged human exposures were primarily reported by neighbors or individuals who were in agricultural areas but not doing agricultural labor.

Violations

Complaint investigations may result in the determination that a violation of state or federal laws or rules has occurred. During 2002 and 2003, two-thirds of WSDA complaint investigations (66% in 2002 and 68% in 2003) resulted in some type of violation. Most violations are not severe in nature (see Severity Rating of WSDA Complaint Cases below) and most violators are issued a warning or correction notice rather than issued fines or license suspensions.

Type of Activity in Complaints with Violations
Complaints are classified by WSDA according to the following type of activities:

- **Agricultural:** Incidents occurring in an agricultural environment such as farming, forestry, greenhouses, or Christmas tree farming.
- **Commercial/industrial:** Incidents by licensed operators making applications to offices, restaurants, homes, and landscapes.
- **Pest Control Operator (PCO):** Incidents involving a subset of commercial/ industrial operators licensed to make applications to control structural pests.
- **Wood Destroying Organism (WDO):** Incidents involving inspections on structures for fungi, insects, and conditions that lead to pest conditions. No pesticide applications are made.
- **Residential:** Includes any application of a pesticide in a residential environment by the homeowner, resident, or neighbor.
- **Right-of-ways:** Applications made on public land such as roadways, electric lines, and irrigation canal banks.
- **Other:** The WSDA code for undefined use and includes licensing, storage, registration, records, and similar activities.

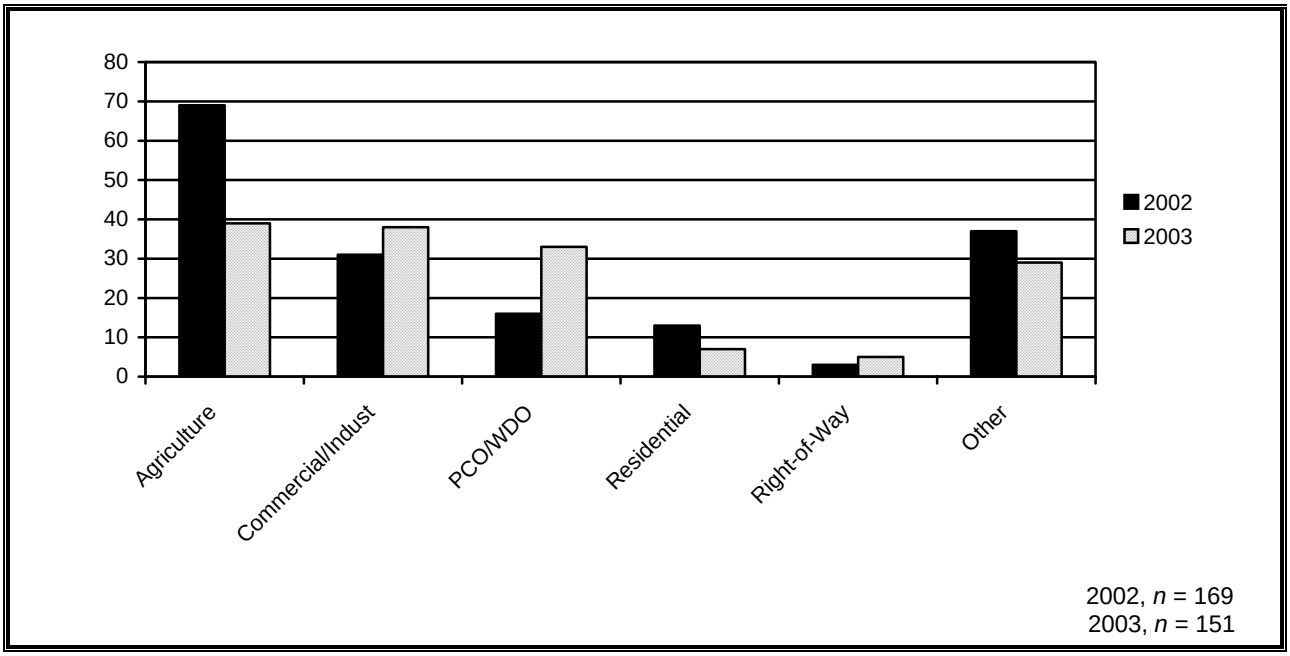
Table 14 shows the complaints with violations by type of activity from 1999 through 2003.

Table 14. WSDA Violations by Type of Activity, 1999 - 2003

Activity	1999	2000	2001	2002	2003
Agricultural	50	48	63	69	39
Commercial/Industrial	19	33	27	31	38
PCO/WDO	11	14	28	16	33
Residential (non commercial)	10	11	11	13	7
Right-of-Way	1	8	8	3	5
Other (licenses, records, etc.)	10	7	15	37	29
Total Violations	101	121	152	169	151

Figure 15 identifies the violations by type of activity for 2002 and 2003.

Figure 15. WSDA Violations by Type of Activity, 2002 and 2003



Violations alone do not give an accurate picture of pesticide exposures. The following cases are examples of pesticide exposures where no violations were cited. Both cases involved drift and the exposed persons had confirmed short-term hospital or doctor care (severity rating 4), but WSDA could not take corrective action. In the first instance, a specific pesticide applicator could not be definitely linked to the exposure.

Case Y12-2003. A dump truck driver alleged he was sprayed from a helicopter aerial application of malathion to a cherry orchard. The truck was on a road near the orchard with the windows were down. The driver reported he became ill that evening and went to the doctor the following day. Although residue was detected on the truck and on vegetation taken off the target site, no citations could be issued as several applications of malathion were made on the same day in the same area and the source of the residue could not be proven.

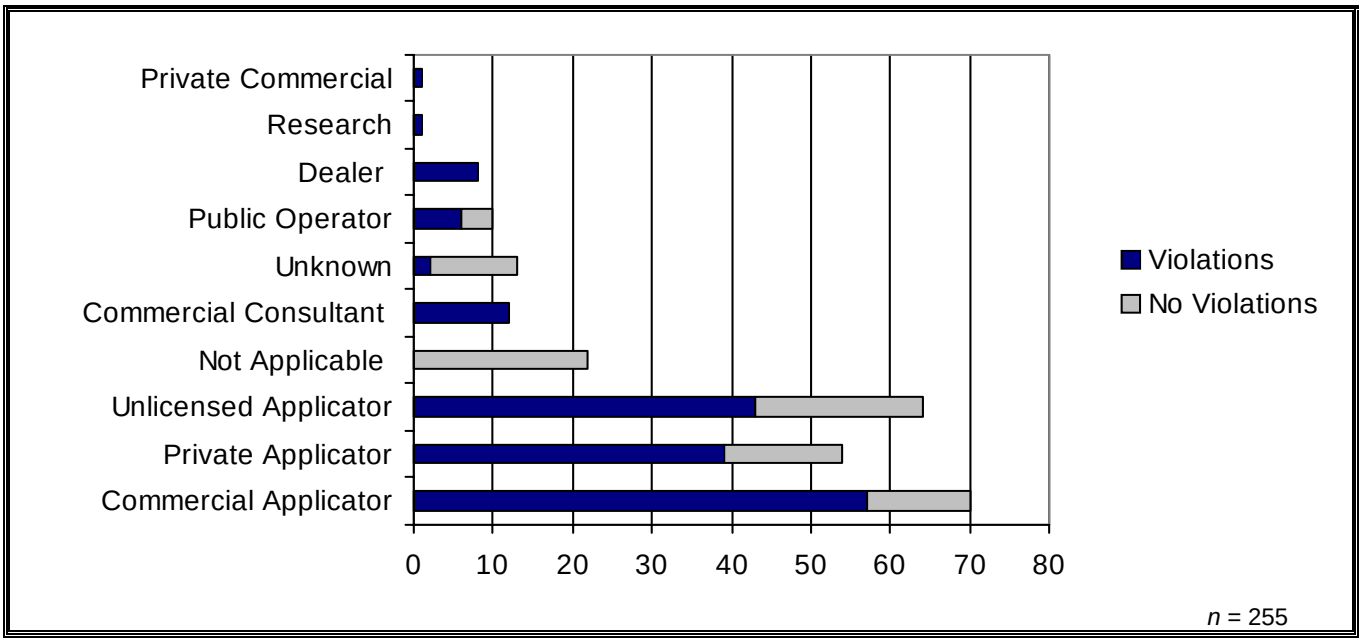
The second case was a referral to WSDA from the Department of Health (DOH). The person involved did not file a complaint and WSDA could not continue its investigation due to lack of evidence.

Case Y17-2003. An irrigation district employee was allegedly sprayed or drifted on from an aerial application of dimethoate to potatoes. His employer instructed him to shower, bagged his clothing, and transported him to a hospital where he was treated for pesticide exposure. The hospital notified DOH and DOH contacted WSDA. The WSDA requested the clothing worn at the time of the exposure and explained to the employer that they had 24 hours to file a complaint. The investigation could not continue as no complaint was filed and no clothing evidence was made available.

Type of License in Complaints with Violations
In 2002, WSDA licensed approximately 4,200 Commercial Applicators and Operators and over 20,000 Private Applicators. Although WSDA licenses fewer commercial than private applicators, commercial applicators make many more applications per licensee and more applications on land not owned by the applicator. This increases the probability of complaints for commercial applicators. See Appendix D for information about WSDA license types.

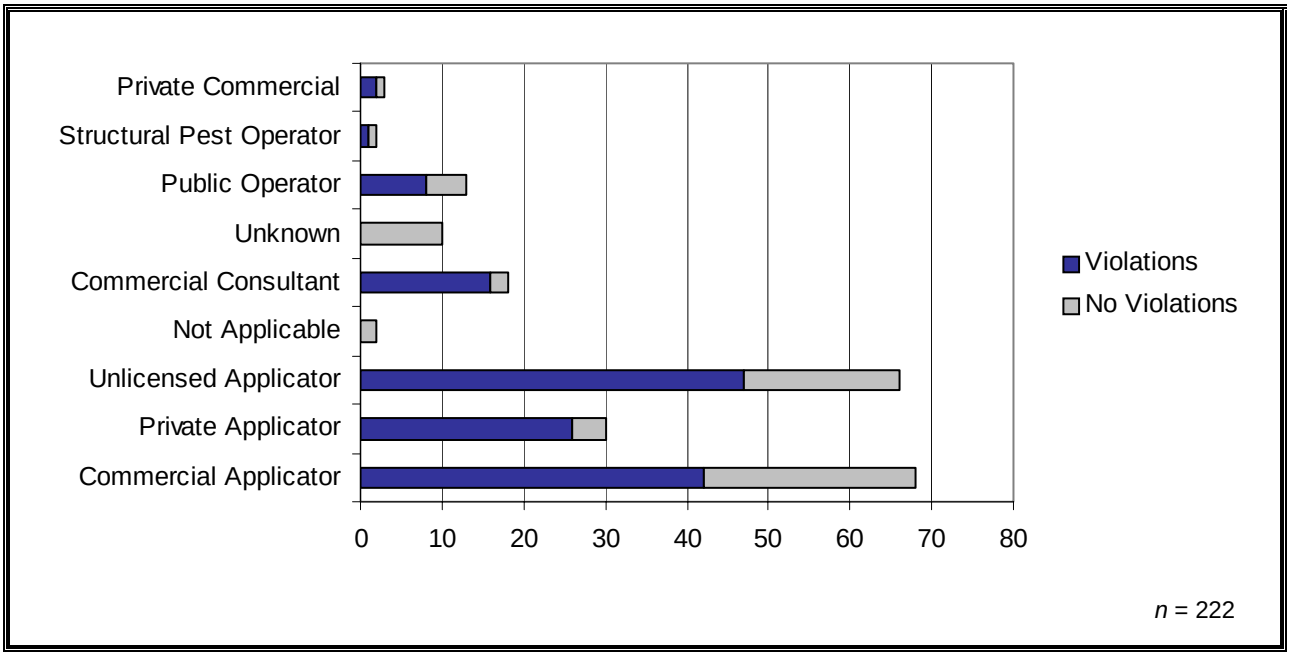
In 2002, commercial applicators were involved in 70 complaints with 54 violations. Private applicators were involved in 55 complaints with 38 violations. Unlicensed applicators were involved in 64 complaints with 43 violations. Unlicensed applicators were primarily unlicensed people conducting wood destroying organism inspections (Figure 16).

Figure 16. WSDA Type of Licensee Involved in Cases With and Without Violations, 2002



In 2003, Commercial Applicators were involved in 68 complaints with 42 violations. Private Applicators were involved in 30 complaints with 26 violations. Unlicensed Applicators were involved in 66 complaints with 47 violations (Figure 17).

Figure 17. WSDA Type of Licensee Involved in Cases With and Without Violations, 2003



Agricultural Complaints

In agriculture, most complaints involve pesticides applied to orchards. This is not unexpected, as orchards tend to be located in more populous areas, and may be on smaller acreages intermixed with other crops, housing, and heavily traveled roads. The most frequent complaint involves apple orchard applications. The most frequent agricultural complaints in 2002 involved possible drift to a person, followed by exposure of bees to a pesticide, and then drift to property. The most frequent agricultural complaints in 2003 involved possible drift to a person and to wheat (Table 15).

In 2002, bee kills were a major agricultural complaint source. The use of the insecticide thiamethoxam, even when applied according to the label, is highly toxic to bees. To avoid toxicity to bees, no blooms can be present when this material is applied, although the label allows a small percent of bloom. In 2003, WSDA made regulatory changes to eliminate bee contact with blooms to address this problem. Only one bee kill was reported in 2003, and this incident was not related to thiamethoxam use.

Agricultural complaints commonly involve an agricultural drift to a residence or vehicle. The following case illustrates a serious agricultural incident in which 24 children were affected.

Case Y05-2002. On a Friday afternoon, an aerial applicator applying dimethoate to an alfalfa field over sprayed a school bus with 24 grade school children and driver on board. The weather was hot and the school bus windows were open. The applicator apparently did not see the school bus, possibly because of tree cover, and the spray drifted across the road and into the path of the bus. Dimethoate residue was found on the exterior and interior of the bus. The driver stated that many of the children covered their faces with their shirts. The driver and one student reported symptoms to DOH. The applicator was fined $1650 and his license was suspended for 27 days.

Table 15 summarizes the most frequent target and complaint sites for investigations in which citations were issued for agricultural violations, 2002 and 2003.

Table 15. WSDA Agricultural Violations, 2002 and 2003

Most Frequent Target site*	2002	2003
Apples	10	8
Pears	4	4
Cherries	3	4
Unspecified orchard	8	
Potatoes	1	3
Wheat	6	3
Hops	5	
Alfalfa/seed	3	
Grapes	2	
Fallow		3
Sales		3
Hay, field crops, yard, mushrooms, weeds	5	

Most Frequent Complaint site**	2002	2003
Human exposure	14	9
Bees	7	1
Property	6	4
Wheat		6
Alfalfa	4	
Water		4
Ornamentals	3	
Unspecified orchard	4	
Hay		3
Pears	2	
Animals	1	2
Mushrooms, organic pears, apples, grapes, cherries	5	

* *Target site is the intended target for the pesticide.*
** *Complaint site is where the pesticide landed or the type of complaint filed.*

Non-Agricultural Complaints

In 2002 and 2003, faulty Wood Destroying Organism (WDO) Inspections were the most frequent non-agricultural complaint. Generally, these complaints occur because inspectors fail to notice or note signs of infestation or wood rot rather than diagnosing problems that do not exist. The most frequent type of violation cited by WSDA was failure to keep accurate or adequate records (did not record conditions conducive to rot or the presence of insects) and failure to obtain the proper license type for the application being done. Complaints about misuse and direct applications are more frequent in non-agricultural applications than in agriculture.

The most common complaint about non-agricultural applications concerns drift or misapplications by the lawn and ornamental industry. The second most common are neighbor-to-neighbor complaints about chemical trespass or intentional misuse of pesticides to cause harm.

Table 16 summarizes the most frequent target and complaint sites for investigations in which citations were issued for non-agricultural violations, 2002 and 2003.

Table 16. WSDA Non-Agricultural Violations, 2002 and 2003

Most Frequent Target site*	2002	2003
Ornamentals	11	7
Lawn	4	5
Trees	4	6
House/apartment	4	0
Property	3	0
Weeds	2	8
Parking, school, mosquitoes	3	0

Most Frequent Complaint site**	2002	2003
Property	8	3
Person	6	3
Trees	4	7
Lawn	3	7
Ornamentals	3	5
House	1	0
Animal, school, garden, right of way	4	0

* *Target site is the intended target for the pesticide.*
** *Complaint site is where the pesticide landed or the type of complaint filed.*

The distribution of complaints has been consistent over the years and points to the need for greater education of applicators on drift reduction and maintaining records. Some violations may reflect the transient nature of employment or lack of training for applicators and some may reflect willful fraud. The number of preventable violations points to the continuing need for a strong agency enforcement program. However, given the estimated number of applications, the number of complaints directed to the department for serious offenses are few.

Applicators must comply with all precautions and directions on the pesticide label. The following case illustrates problems that can occur when the label is not followed.

Case C15-2003. Over $9000 in ornamental plant damage occurred when soil commercially treated with herbicides blew off-site. The site was an abandoned orchard that had been cleared without further management or irrigation. The blown soil was found to contain substantial levels of diuron, bromacil, and 2,4-D, plus trace amounts of other herbicides. The Krovar (diuron and bromacil) label and the 2,4-D label warn against applying where the soil can move off-site. Krovar can be taken up from treated soil by plant roots. The applicator applied Dimension, a dithiopyr herbicide, on a non-crop site. This product is labeled only for established lawns, sod, turf farms and ornamentals. The applicator was fined $200 with a one-day license suspension. The DOH was contacted about the health concerns of nearby residents and Ecology was contacted about the excessive soil blowing from the site.

Children

In 2002, children were involved directly or indirectly in 12 cases. The Department was notified about all of the cases. There were off-target residues in seven of the cases and two of the seven had symptoms. No exposure was determined for the remaining five cases.

In 2003, WSDA investigated 11 cases that involved children. Department of Health was notified about these cases and they were jointly investigated. Three cases involved possible exposure, two with possible health symptoms. No exposure was determined to have occurred in the remaining eight cases.

Severity of Reported Complaints

The WSDA rates the severity of cases after complaint investigation is complete. See Table 17 for a detailed description of each rating. As in previous years, the majority of complaints were assigned a severity rating of 2 or less: 220 (86%) in 2002 and 185 (83%) in 2003. In 2002, one case with a high severity rating of 5 involved animal deaths (chickens).

Table 17. Severity Rating of WSDA Complaint Cases, 1999 - 2003

Rating	1999	2000	2001	2002	2003	Criteria
0	13 7%	20 10%	23 10%	30 12%	22 10%	Problem not due to pesticides and/or no cause determined; PCO/WDO inspection with no violations
1	65 34%	40 20%	71 31.5%	76 30%	51 23%	Pesticides involved, no residue, no symptoms occurred; possible pesticide problem, not substantiated; issues involving records, registration, posting, notification (multiple chemical sensitivity) or licensing; DOH classified "unlikely" or "insufficient information"
2	72 38%	89 45%	72 32%	114 45%	112 50%	Residue found, no health symptoms (human, animal); health symptoms not verified; multiple minor violations; off label use; worker protection violations; PPE violations with no health symptoms; plants with temporary or superficial damage only; PCO/WDO faulty inspections; DOH classified "possible"
3	24 13%	31 16%	35 15.5%	31 12%	22 10%	Minor short-term health symptoms (rash, eye irritation, shortness of breath, dizzy, nausea, vomiting); bee kills less than 25 hives; minor fish kills; economic plant damage under $1000; evidence of deliberate economic fraud; DOH classified "probable"
4	15 8%	17 9%	20 9%	3 1%	13 6%	Short-term veterinary or hospital care; bee kills over 25 hives; significant fish kills; significant economic plant damage (over $1000); environmental damage; illness involving children; DOH classified "probable"
5	3 2%	2 1%	4 2%	1 .4%	2 1%	Veterinary or hospital care overnight or longer; physician diagnosed children's illness as caused by pesticides; animal death due to pesticides; significant environmental damage; DOH classified "definite"
6	0	0	0	0	0	Human death due to pesticides
Total	**192**	**199**	**225**	**255**	**222**	

The following two cases from 2003 were given a severity rating of 5.

Case Y6-2003. A complainant called WSDA when two of her dogs died. No veterinary examination was done on the dogs, as the vet had not observed pesticide-related symptoms. Investigation determined that a licensed Private Applicator applied zinc phosphide and indandione (rodenticides) to his orchard to control gophers. Contrary to label instructions, he poured bait into piles in and outside of several rodent holes. Two of his dogs ate the bait and died. He shared the pesticide with three unlicensed neighbors. The applicator was cited for 'faulty, careless and negligent', 'applying contrary to label' (not applying by broadcasting and applying during the growing season), 'distributing a federal Restricted Use pesticide to unlicensed persons' and 'failure to keep records'.

Case C4-2003. An unlicensed applicator illegally baited calf carcasses with aldicarb to intentionally poison his neighbor's dogs who he said were running free and killing his cows. Twelve dogs died, three people may have become ill after handling the dead or dying dogs, and others may have been exposed. There were unsubstantiated reports of pesticide exposure to horses and wild birds. The individual was cited and fined.

Type of Pesticide Involved

In 2002, herbicides were involved in 100 complaints and insecticides in 60 complaints. There were relatively fewer complaints about other pesticides such as fungicides (9), rodenticides (4), desiccants (3), repellent (1), avicide (1), and disinfectant (1). This may be because there are more obvious detrimental effects from herbicide and insecticide misuse and because they are generally applied at a higher frequency with more power equipment over larger areas.

In 2002, for the first time since complaints have been summarized for this report, the only organophosphate associated with five or more complaints was chlorpyrifos. In previous years, there were more complaints received about azinphos methyl, chlorpyrifos and diazinon. This may indicate the changing nature of pesticide applications in the orchard industry.

In 2003, herbicides were involved in 110 complaints, insecticides in 44 complaints, fungicides in 10 complaints, and miscellaneous unspecified products in 11 complaints. Other products such as fumigants, growth regulators, miticides, adjuvants, and rodenticides were involved in other complaints.

In 2002, two herbicides, glyphosate (32 complaints) and 2,4-D (17 complaints), were the most frequently reported active ingredients. Many complaints involved tank mixes of several products.

In 2003, glyphosate (33 complaints) and 2,4-D (21 complaints) were again the most frequently reported active ingredients Table 18.

Table 18. Active Ingredients Most Commonly Involved in Complaints, 2002 and 2003

	2002	2003
Glyphosate	32	33
2,4-D	17	21
Thiamethoxam	13	-
Dicamba	-	11
Chlorpyrifos	6	-
Sulfur	6	-
Triclopyr	7	5
Azinphos methyl	-	5
Diuron	-	4
MCPP	-	4
Oil	5	4
Miscellaneous	14	14

Complaints reported to WSDA should be regarded as indicators of potential problem areas and are not a definitive summary of all misapplications. For example, drift involving products such as sulfur and kaolin (clay) may occur more often than is reported. Such products are readily identifiable and people tend to be less worried about unknown effects from these products. These products also have minimal health effects and minimal detrimental effects on non-target plants and property.

Enforcement Actions

Complaint investigations may result in the determination that a violation of state or federal laws or rules has occurred. Generally, first offenders or minor infractions are given a Notice of Correction and a period of time to come into compliance. For more serious infractions, WSDA follows the penalty matrix for any legal actions as specified in WAC 16-228-1130.

Sometimes more than one corrective action is taken on a case. In this report, only one corrective action per case is identified. For example, if more than one Notice of Correction (NOC) was issued, the action would be listed as one NOC. However, if more than one type of corrective action was taken, such as a NOC and a Notice of Intent (NOI), both types are listed.

In 2002, the following corrective actions were taken: No Action Indicated (84), Verbal Warning (6), Advisory or warning letter (8), Notice of Correction (127), Notice of Intent (Fines, License Suspension) (31), and Referred (2) (Table 19). Three cases had more than one type of action. (See Appendix D for Enforcement Action definitions.)

Table 19. WSDA Agency Actions, 1999 - 2003

	1999	2000	2001	2002	2003
No action indicated	91	78	74	84	71
Verbal warning	5	1	3	6	3
Advisory letter/ Warning letter	10	4	4	8	8
Notice of correction	64	96	111	127	116
Notice of intent/ Administrative Action	20	17	37	31	26
Referred	2	2	2	2	0
Stop sale		1			
Total actions	192	199	231	258	224

In 2003, at the time of publication of this report, the following corrective actions were taken: No Action Indicated (71), Verbal Warning (3), Advisory Warning (8), Notice of Correction (116), and Notice of Intent (26) (Table 19). Two cases had both NOCs and NOIs issued for the applicators involved.

Other Agencies Involved

The WSDA works in cooperation with other state and local agencies in their particular area of responsibility and expertise. Agencies cooperate in the collection of evidence and testimony. Cooperating agencies may report their involvement in these cases independently of WSDA, or they may do no further independent investigation.

In 2002, WSDA consulted with other state, federal and local agencies, including the police, in 52 investigations. The departments of Health and Ecology and the U.S. Environmental Protection Agency were the most frequently consulted. Two cases were referred to the Yakama Nation.

In 2003, WSDA consulted with other state, federal and local agencies and Washington State University in 49 investigations. The departments of Health and Ecology and the U.S. Environmental Protection Agency were the most frequently consulted.

WSDA Prevention Activities, 2002 and 2003

In addition to investigations of possible pesticide misuse, WSDA inspects marketplaces, importers, manufacturers, and pesticide users for compliance with state and federal laws and regulations; licenses pesticide applicators and conducts training on the Worker Protection Standard; administers a waste pesticide collection program; and addresses groundwater issues that involve pesticides.

Compliance

- Conducted 19 marketplace inspections to check for cancelled, suspended, and unregistered products; child-resistant packaging; etc.
- Conducted 84 agricultural use inspections to evaluate compliance with pesticide product labels, Worker Protection Standards, equipment, licensing, etc.
- Conducted 23 dealer inspections to check for misbranded, cancelled, and restricted use sales of pesticide products, and to check for dealer licensing.
- Conducted six inspections at establishments that produce pesticides to check for labeling, disposal, record reporting and containment.
- Conducted numerous presentations at meetings held by growers, schools, labor groups and other organizations to discuss pesticide compliance and preventing incidents.

Registration

- Initiated a toxicological review of Special Local Needs, Section 18 Emergency Exemptions and Experimental Use permits on certain highly toxic or very highly toxic pesticides.
- Participated in eight educational workshops regarding West Nile virus and compliance with state rules and regulations and proper application techniques.
- Worked with the U.S. Environmental Protection Agency and the manufacturer on label and rule restrictions for thiamethoxam to prevent bee kills.

Licensing and Farmworker Protection

- Developed and mailed the annual pesticide newsletter, *Pesticide NOTES*, to all licensed applicators. The newsletter has information on preventing pesticide violations, new

pesticide regulations and current pesticide problems. The July 2003 Pesticide NOTES highlighted West Nile virus and mosquito control.
- Developed hands-on Train the Trainer Spanish language pesticide worker safety programs.
- Continued outreach to Spanish speaking farmworkers on pesticide safety through radio programs, newsletters, training classes and presentations.
- Developed Spanish language training manuals and applicator exams.

Waste Pesticide Disposal
- Collected and disposed of 172, 000 pounds of waste pesticide in 2002.
- Collected and disposed of 97,000 pounds of waste pesticide in 2003.
- Identified contents of unknown containers suspected to be pesticides and disposed of them or recommended other disposal options.

Groundwater Protection
- Began mapping project of groundwater depth (where known), soil types and land use.
- Participated in educational meetings on protecting groundwater from pesticides.